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ABSTRACT

The previous literature on the socioeconomic correlates of environmental concern places great stress on the middle class being more supportive of environmental agendas than the working or lower socioeconomic class. The authors believe that methodological problems in this research and the theoretical implications of the middle class generalization warrant an empirical reconsideration. Social class indicators explain relatively little variance in environment attitudes. Education explains virtually all the variance in environmental attitudes accounted for by "class." Education is subordinate to age as a predictor, and much of the gross effect of education is the spurious result of high educational backgrounds of most young adults. (Author/RH)

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SOCIAL CLASS AND MASS ENVIRONMENTAL BELIEFS: A RECONSIDERATION*

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SOCIAL CLASS AND MASS ENVIRONMENTAL BELIEFS:
A RECONSIDERATION

ABSTRACT The previous literature on the socioeconomic correlates of environmental concern places great stress on the middle class being more supportive of environmental agendas than the working or lower socioeconomic class. We argue that certain methodological problems in this research and the theoretical implications of the pro-environmental middle class generalization warrant an empirical reconsideration. We then find social class indicators explain relatively little variance in environmental attitudes. Education explains virtually all the variance in environmental attitudes accounted for by "class." However, education is not related to environmental beliefs in an unambiguous linear fashion. Education is subordinate to age as a predictor of environmental attitudes, and much of the gross effect of education is the spurious result of the generally high educational backgrounds of young adults. We conclude by discussing the implications of our research for sociology of environmental problems theory.

Environmental sociologists have long been interested in the relations between social class and environmental attitudes. However, we are dissatisfied with certain theoretical and methodological aspects of the present literature and argue that the issue bears further reconsideration. Most relevant studies report that environmental agendas are primarily supported by the middle or upper-middle class (see, for example, Hamilee, et al., 1968; Hendee, et al., 1969; Harry, et al., 1969; Devall, 1970; Faich and Gale, 1971; Gale, 1972; Tognacci, et al., 1972; Morrison, et al., 1972; Morrison, 1973; Rosenbaum, 1973; Buttel and Flinn, 1974). This general view is crucial for both theoretical and applied reasons. In a theoretical sense, the presumed middle class nature of environmental issues has often been interpreted within a variant of "order" theory (Horton, 1966) emphasizing "responsible middle class" themes -- assertions found suspect in other research (Hamilton, 1972). Tognacci and his coworkers (1972:85), for example, find "those persons most concerned about environmental issues appear to reflect the same configuration of social and psychological attributes which have traditionally characterized individuals active in civic, service, and political organizations." The implication is that the middle class is "responsible" vis-a-vis political participation, internalization of democratic norms, and conservation of the society's resource base, while those of lower socioeconomic status are implicitly "irresponsible"--unfortunate laggards in the evolution toward a "post-industrial" society.

In a practical sense, the social class/environmental concern issue has important implications for the support base of the environmental movement. Previous research has documented hostility between "elitist" environmentalists and the American working class (Albrecht, 1972; Morrison, 1973; Deutsch and Van Houten, 1974). It is likewise noted that

environmental reforms generally have inegalitarian consequences (Hardesty, et al., 1971; Krieger, 1970; Schnaiberg, 1975; England and Bluestone, 1973). Indeed, the extent of working class opposition to environmental control may be due primarily to the nature of reform tactics undertaken by the state and environmental organization elites.[1] In any event, we feel it is quite problematic to assert that the working class--or other related socioeconomic status groupings--is inherently ambivalent toward environmental issues.

THEORETICAL AND METHODOLOGICAL ISSUES: THE CASE FOR RECONSIDERATION

A crucial methodological component of the middle class pro-environmentalism generalization is the predominance in the literature of studies of large, nationwide environmental groups. That members of environmental organizations are upper-middle class--well-educated, white-collared, and moderately affluent--is beyond doubt (Dunlap, 1975). Nevertheless, we feel that researchers have been too unquestioning in equating these results with research on mass publics. Much of the environmental attitudes literature has characteristically strained to integrate these two lines of research, anticipating that if environmental organization membership is class-biased, mass environmental beliefs should be similarly structured, and the same social processes are producing the two--organizational and mass public--phenomena.[2]

In spite of convincing theoretical arguments as to why environmental issues draw greatest support from the well-educated middle class,[3] several researchers have pointed toward equally compelling reasons why the U.S. working class should be environmentally concerned. Blue-collar workers are clearly subjected to disproportionately large amounts of workplace pollution (Sexton and Sexton, 1971), and working class families objectively possess the most impure and aesthetically-displeasing residential environ-

ments (Zwerdling, 1973; Morrison, et al., 1972; Burch, 1971; Deutsch and Van Houten, 1974; Smith, 1974). Notwithstanding the tendency for "liberal" environmental reforms to have inegalitarian consequences, there seems to be a surprising amount of working class environmental concern (Smith, 1974). The poor quality environments of many working class families, plus the hostility of some workers to (corporate) targets of environmental reform, may lead a substantial number of working class families to favor environmental improvement. Nevertheless, the point we wish to make is that many researchers may have underestimated the extent to which environmental issues affect low "socioeconomic status" families and how the working class represents a substantial nascent support base for the environmental movement.

An additional methodological consideration in evaluating the social class/environmental concern literature is the structuring of "class" dimensions[4] in relation to various environmental concern dependent measures. Education, almost without exception, been the "class" indicator most closely related to environmental concern (the bivariate Pearsonian parameters have largely ranged from .15 to .30; Tognacci, et al., 1972; Dillman and Christenson, 1972; Wright, 1975; Martinson and Wilkening, 1975). Income and occupation have been less closely tied to environmental concern in these studies. That education is seemingly more highly correlated with pro-environmental orientations than income or occupation suggests that middle class environmental values may primarily embody "status group" concerns (Weber, 1947) of the well-educated. These concerns are likely drawn from leisure interests--particularly "appreciative" outdoor recreation (Hendee, et al., 1971). Dunlap and Heffernan's (1975) research supports this argument and suggests that the origins of middle class pro-environmentalism may be leisure interests which reflect suspicion of a working

class that fails to "appreciate" nature.[5]

The extent to which class is the predominent factor structuring mass environmental beliefs can be assessed only obliquely with bivariate data analysis. The literature on mass environmental beliefs is very preliminary in nature, with few studies advancing beyond bivariate linear models. The absence of multivariate analysis may be particularly telling for the question of social class and environmental attitudes. The three class indicators of import to this inquiry--education, income, and occupation--are substantially interrelated with two other variables--age and place of residence--presumed causally connected to pro-environmentalism. Residence in urban areas where environmental problems are most acute would appear to be a likely contributor to public expressions of pro-environmentalism (Dillman and Christenson, 1972). Likewise, the young have been found to be disproportionately pro-environmental, presumably because environmentalism is an appropriate outlet for youth's relatively low commitment to the social order and their skepticism regarding the society's dominant value system (Hornback, 1974). For present purposes, the fact that the well-educated tend to be young and urban residents suggests that much of the gross effect of education on environmental beliefs might be spurious.

Another factor neglected in previous research is that the various measures of environmental concern appearing in the literature may embody implicit manifestations of middle class versus working class interests. In light of this possibility we utilize two different dimensions of environmental concern dependent measures. The first such measure, awareness of environmental problems (Martinson and Wilkening, 1975), taps only the extent to which persons feel various environmental problems are serious. This variable, then, is relatively devoid of "class interests" in that potentially inegalitarian modes of environmental reform are left unspecified. A second dependent variable, support for environmental reform, measures attitudes

toward governmental regulation of private natural resource decision-making--i.e., the "right" of private individuals and legal entities to degrade the environment. Presumably, liberal environmental reforms compete for funds with welfare-state agendas (Morrison, 1973), as well as pose threats to working class economic security.[6] Working class families, then, might be less "pro-environmental" toward supporting liberal environmental reforms than they would with respect to awareness of environmental problems.

The foregoing discussion suggests the following hypotheses. The general empirical hypothesis undergirding our reconsideration of the social class/environmental concern issue is that "class" variables are causally subordinate to age and place of residence in the prediction of environmental beliefs. Secondly, we predict that education is the "class" variable most closely and positively related to both dimensions of environmental orientations. Also, when education is controlled, income and occupation should have no relation to environmental attitudes. Lastly, support for environmental reform is predicted to be more closely associated with education (and class indicators as a whole) than awareness of environmental problems.

DATA AND METHOD

The data for this study were collected by the Wisconsin Survey Research Laboratory in a statewide survey during the fall of 1974. A multi-stage probability sampling technique was employed. The respondent in a given household unit was chosen by use of randomized selection tables. Only adults 18 years of age or older were chosen as respondents. Housing units on military reservations and adults in institutions or group quarters were not included. There were 548 respondents in the total sample.

The two dependent variables--awareness of environmental problems and support for environmental reform--were operationalized as summated Likert

scales. The constituent items of the awareness of environmental problems scale were: "Pollution of lakes and streams in this area." "Air pollution in this area." "Noise in this area," "Litter in this area," "People living too closely together in this area." and "Too many using recreational facilities in this area." Persons indicating a given environmental problem was "very serious" were assigned a score of four, while other responses ("somewhat serious, small problem, or no problem at all") were given the appropriate score ranging from one to three. Missing data on a given item were assigned the sample mean. This procedure yielded a scale with a Cronbach's alpha coefficient of .806.

Support for environmental reform was measured with a three-item Likert scale with the following items: "Are you for more governmental efforts to control air and water pollution?" "Industry should be allowed to handle pollution its own way." and "Pollution laws have gotten too strict in recent years." Persons expressing a strong pro-environmental stance on a given item were given a score of five and other responses were assigned the appropriate score ranging from one to four. Missing data were assigned the sample mean for a given item. The scale exhibited an alpha coefficient of .768. Awareness of environmental problems and support for environmental reform were found to be separate dimensions of environmental concern according to a quartimax-rotated factor analysis, and the scales exhibit a zero-order correlation of .247 in the total sample.

Education and age were measured by direct questions asking for the number of years of schooling completed and the respondent's exact age in years. Respondents were placed in the six education categories shown in the tables below, with missing data given a score of 12. Age was categorized as shown in the data analysis tables, with missing data assigned the sample mean (44). Place of residence was determined by addresses and census materials; there were no missing data. Total family income was measured

with a direct question asking respondents the approximate income earned by members of the entire family during the preceeding year. Respondents were asked to choose among 13 income categories, the highest category being $25,000 or more. Missing data were assigned the sample mean (12,584). Household head's occupation was measured by direct questions asking the respondent's and spouse's occupations and was defined in terms of the head's current or (if retired or unemployed) last regular job. Head's occupation was employed in preference to respondent's occupation, following general procedure in the literature (Barber, 1957; Hamilton, 1972). This variable could be measured only for respondents who were the household head or the spouse of the head, and all missing data (N=49) were eliminated from data analysis operations. Occupation, residence, and income categories appear in the tables below.

This study utilizes multiple classification analysis (MCA) in preference to multiple linear regression or cross-tabular analysis. MCA allows the interpretive flexibility afforded by cross-tabulation, while retaining the statistical power of parametric methods. MCA output consists of category means for multiple independent variables, simultaneously adjusted for the effects of all variables in the set. Bivariate MCA, of course, is identical to one-way analysis of variance (see Blau and Duncan, 1967; Nie, et al., 1975, for discussions of MCA procedures).

RESULTS

Table 1 presents analysis of variance statistics for the relationships among the three dimensions of social class, age, place of residence, and the two attitudinal dimensions of environmentalism. As anticipated, education is the social rank variable most highly associated with both environmental attitudes. Education is about equally related to awareness of environ-

mental problems (eta = .27) and support for environmental reform (eta = .25). The postgraduate category exhibits a sizeable positive deviation from the grand mean and the grade school category shows a negative deviation from the mean with respect to both dependent measures. However, the overall relationships are by no means linear. For both dependent variables we find the category mean of the "some college" category exceeding that of the college graduate aggregate.

[Table 1 about here]

The data in Table 1 relating income to awareness of environmental problems and support for environmental reform reveal no demonstrable relationships. The low moderate income category ($8000-$9999) has the largest positive deviation from the grand mean in both cases, while the low income group exhibits a consistent negative deviation from the grand mean of both dependent measures. But these deviations are quite meager, and both relationships are decidedly non-linear. Occupation of the household head shows no major relationships with the two dependent measures of the sort the literature would lead us to anticipate. In particular, there are no clear-cut white-collar/blue-collar differences in either dimension of environmental concern. Farm families, however, are underrepresented in terms of both awareness of environmental problems and support for environmental reform.

Age is clearly a major predictor of both dependent variables (eta = .35 with respect to both dependent measures). While both relationships are approximately linear, the 18-25 years of age category shows substantial positive deviations from the grand mean for both awareness of environmental problems and support for environmental reform. In sum, age appears to account for considerably more variance in environmental attitudes than education, income, or occupation. Place of residence proves to be the best predictor of awareness of environmental problems (eta = .40), as would be

expected from the nature of this dependent variable. Residence, however, has only a meager (although essentially linear) relation to support for environmental reform (eta = .15).

Table 2 presents multiple classification analysis (MCA) summary statistics for the net effects of the five independent variables on awareness of environmental problems and support for environmental reform. Consid-

[Table 2 about here]

ing first the awareness of environmental problems dependent measure, we find that neither education nor any other social class indicator explains a significant amount of variance. The bivariate impact of education on awareness of environmental problems, then, is largely the spurious result of the generally high educational backgrounds of youth and urban residents. Place of residence is the best multivariate predictor of environmental problems awareness (beta = .36), followed by age (beta = .24). MCA data for the prediction of support for environmental reform display a somewhat different causal pattern than that of awareness of environmental problems. Nevertheless, education is again causally subordinate to age (beta = .16 and .31, respectively). Place of residence, income, and occupation have only minor multivariate effects on support for environmental reform.

It is also useful to note that the multivariate impacts of education on environmental attitudes continue to manifest the non-linear patterns apparent in the bivariate data (see Table 1). The multivariate impact of education on awareness of environmental problems is largely accounted for by the underrepresentation of grade school educated persons in this awareness, while the statistically significant net effect of education on support for environmental reform is mostly due to the large positive adjusted deviation of the post-graduate educational category from the grand mean. In sum, what meager multivariate associations there are between education

and environmental attitudes can be only incompletely ascertained with multiple linear regression methodology.

DISCUSSION

This study has re-examined the relationships between social class and mass environmental beliefs and has found them less pervasive than the bulk of the relevant literature would suggest. The combined net effects of the three major indicators of social class--education, income, and occupation--are quite meager.[7] Also, the age and place of residence "control" variables were found to be the better predictors of both awareness of environmental problems and support for environmental reform. In sum, working class hostility toward environmental issues has probably been overemphasized in the literature--with important theoretical implications being grounded on this presumed ambivalence.

Education explains virtually all of that part of the variance in environmental attitudes accounted for by social class indicators. Income exhibits only small bivariate and multivariate relationships with both awareness of environmental problems and support for environmental reform. Occupation--which is generally regarded as the foundation of class in advanced capitalist societies (Parkin, 1971; Giddens, 1973)--also has no substantial bivariate or multivariate association with mass environmental beliefs.

The importance of residence in shaping awareness of environmental problems was strongly supported by the results of this study. Place of residence, for example, accounts for considerably more variance in awareness of environmental problems than all social class indicators combined. Persons living in large cities are more likely to feel environmental problems are serious than small town or rural residents--presumably because environmental problems are objectively more serious in large population

concentrations. Age also appears to be a major factor shaping both awareness of environmental problems and support for environmental reform. In fact, much of the bivariate relation between education and environmental concern is the spurious result of the generally high educational backgrounds of young persons ($r = -.456$, for the relationship between age and education in the present sample).[8]

Our results suggest further that many researchers have been too unquestioning in their attempts to integrate studies of nationwide environmental groups and mass publics' environmental beliefs (Dunlap, 1975). A. Harry and his colleagues (1971) emphasize, "organized conservationists are upper-middle class," while the mass environmental movement support base is much less so. Clearly, there are separate social processes involved in joining a voluntary environmental association than in the general public's becoming aware of and concerned about environmental problems.[9]

The results of our study, then, would appear to have two major theoretical implications. In terms of theory of the U.S. class structure, restraint should be imposed on utilizing environmental attitude studies to suggest the narrowly-self-interested,undemocratic, or overly-materialistic behavior of the U.S. working class. Secondly, our data suggest that mass environmental beliefs may be more accurately characterized as expressions of generational--rather than class--interests. Our notion is that pro-environmentalism dovetails with the historically low commitment of youth to the dominant societal value system during the past decade (rather than, for example, the "privatized" youth culture of the 1950's [Flacks, 1971: 51-53]). We suggest that the strong generational cast to present patterns of environmental beliefs is due, at least in part, to the radicalization of youth during the late 1960's over the Vietnam War, civil rights struggles, and other issues, along with possible "sublimation" of this radical-

ism into reformist movement issues such as environmentalism (see Dunlap and Gale, 1972, for a parallel argument). We might add that the persistence of generational cleavages over environmental beliefs is likely to be problematic since political antagonism among generations is historically variable; "youthful solidarity" (Flacks, 1971) tends to be dissolved as students become workers and parents. The data of this study, however, are clearly limited in assessing the validity of this largely historical argument. But we feel our reconsideration of social class and mass environmental beliefs is a step toward balancing what we believe to be excessive emphasis on middle class pro-environmentalism and inadequate attention to the generational foundations of mass environmental beliefs. We conclude by arguing the utility of complementary historical inquiry into the present generational structuring of environmental values.

FOOTNOTES

1. See the discussions by Schnaiberg (1973) and England and Bluestone (1973) on how prevailing strategies of environmental reform are shaped by the U.S. political economy in such a way as to threaten working class economic security. These phenomena also invite strategies by corporate elites to "delegitimate" environmental reform (Deutsch and Van Houten, 1974; Morrison, 1973).

2. Our examination of the socioeconomic correlates of environmental organization membership within the same sample as reported on in the present study supports this point. The best predictors of environmental organization membership are political participation, membership in other voluntary associations, and family income, rather than environmental values.

3. Several theories have been advanced to explain the alleged middle class nature of environmentalism. Notions of participation paradox and relative deprivation appear most important in the literature (see Morrison, et al., 1972), although we believe the relative deprivation theory to be more relevant to movement organizations than the beliefs of mass publics. Nevertheless, the general argument is that the middle class has largely solved basic material problems and is freed to devote interest to more aesthetic elements of human existence.

4. "Class" is frequently placed in quotation marks in this paper because our readers may legitimately find the use of the three social class indicators methodologically questionable (see Parkin, 1971). However, we feel this procedure is dictated by the nature of the research problem and its previous treatment in the literature.

5. Such an argument is supported by Caplow's (1964:124-127) discussion of upper-middle class norms proscribing overt materialism, conspicuous display, and conspicuous consumption.

6. We utilize the term "liberal" because most environmental reforms objectively require state regulation of the private sector--a position which is considered liberal within the American political tradition (Costantini and Hanf, 1972).

7. Separate analysis among the subsample of respondents presently employed found no bivariate or multivariate association between respondent's occupation and environmental beliefs.

8. Our finding that much of the bivariate association between education and environmental concern is spurious has been corroborated in a related study by Martinson and Wilkening (1975). Utilizing an awareness of environmental problems scale virtually identical to ours, they find the substantial bivariate relation between education and the dependent variable largely the spurious result of younger persons having higher educational attainment than the elderly.

9. See supra note 2.

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Table 1. Analysis of Variance Summary Statistics for the Relationships Among Selected Independent Variables and Awareness of Environmental Problems and Support for Environmental Reform (Unadjusted Deviations of Category Means from Grand Mean and Eta Coefficients).

Independent Variable/Categories		Dependent Variable: Awareness of Environmental Problems, Unadjusted Deviation	Eta	Dependent Variable: Support for Environmental Reform, Unadjusted Deviation	Eta
Grand Mean		12.72		11.18	
Education (Years)	0-8	-2.04	.27*	-1.16	.25*
	9-11	.94		- .18	
	12	.10		.17	
	13-15	.77		.46	
	16	.24		- .05	
	17-20	1.29		1.92	
Annual Family Income ($)	0-3,999	-.42	.09	-.34	.06
	4,000-7,999	-.18		.13	
	8,000-9,999	.72		.18	
	10,000-13,999	.08		-.03	
	14,000-19,999	.22		.05	
	≥ 20,000	-.42		.07	
Head's Occupation	Professional, technical & kindred	.95	.20	.88	.14
	Manager, proprietor & official	-.38		-.10	
	Clerical, sales	.35		.15	
	Skilled manual	-.23		-.06	
	Semi- and unskilled manual	.26		-.18	
	Service	.31		-.13	
	Farmer	-2.42		-.80	
Age (Years)	18-25	2.11	.35*	1.58	.35*
	26-35	.63		.56	
	36-45	- .11		-.75	
	46-55	- .50		-.52	
	56-65	-1.51		-.83	
	≥ 66	-1.57		-.83	
Place of Residence	Open Country	-1.08	.40*	-.38	.15
	2,500	-2.01		-.63	
	2,500-9,999	- .87		.08	
	10,000-49,999	.45		.33	
	50,000-99,999	.89		.32	
	≥ 100,000	2.75		.42	

*Indicates the Eta coefficient is statistically significant at the .05 level or beyond, according to an F-test.

Table 2. Multiple Classification Analysis Summary Statistics for the Effects of Selected Independent Variables on Awareness of Environmental Problems and Support for Environmental Reform (Adjusted Deviations from Grand Mean and Beta Coefficients).

Independent Variable/Categories		Dependent Variable: Awareness of Environmental Problems, Adjusted Deviation	Beta	Dependent Variable: Support for Environmental Reform, Adjusted Deviation	Beta
Grand Mean		12.72		11.18	
Education (Years)	0-8	-1.03	.14	-.43	.16*
	9-11	.70		.05	
	12	.07		.10	
	13-15	.27		.02	
	16	-.17		-.56	
	17-20	.85		1.53	
Annual Family Income ($)	0-3,999	.07	.07	-.08	.08
	4,000-7,999	.23		.43	
	8,000-9,999	.64		.05	
	10,000-13,999	-.08		-.13	
	14,000-19,999	-.08		-.13	
	≥ 20,000	-.46		.13	
Head's Occupation	Professional, technical & kindred	.34	.09	.30	.05
	Manager, proprietor & official	.31		.13	
	Clerical, sales	.12		.03	
	Skilled manual	-.50		-.06	
	Semi- and unskilled manual	.20		-.14	
	Service	-.03		-.16	
	Farmer	-.56		.01	
Age (Years)	18-25	1.69	.24*	1.50	.31*
	26-35	.33		.64	
	36-45	- .15		-.76	
	46-55	.00		-.47	
	56-65	-1.39		-.51	
	≥ 66	-1.02		-.63	
Place of Residence	Open Country	- .96	.36*	-.38	.11
	2,500	-1.50		-.22	
	2,500-9,999	-1.05		-.04	
	10,000-49,999	.39		.34	
	50,000-99,999	.76		.21	
	≥ 100,000	2.49		.28	
Coefficient of Determination			.271		.158

*Indicates the Beta coefficient is statistically significant at the .05 level or beyond, according to an F-test.